

WHAT IS CLAIMED IS:

1. A log acquisition method for acquiring a runtime log of a program including a function for performing a predetermined process, comprising the step of:
  - 5 changing the address of said function loaded for performing said predetermined process to the address of a function for log acquisition,

wherein said function for log acquisition comprises the steps of:

    - 10 calling said function for performing said predetermined process to cause said predetermined process to be executed, receiving the result of the execution, and passing said result to said program;
    - determining whether or not a pointer parameter is
    - 15 defined in a predetermined manner in a function definition in said program; and
    - if the pointer parameter is defined in the predetermined manner, recording a memory content pointed to by said pointer parameter as a log according
    - 20 to said definition.
2. The log acquisition method according to claim 1, wherein said function for log acquisition further comprises the step of calculating memory size according to said definition and said recording step records an amount of the memory content pointed to by said pointer

parameter, said amount being equal to said calculated memory size.

3. A log acquisition method for acquiring a runtime  
5 log of a program including a function for performing a predetermined process, comprising the step of:

changing the address of said function loaded for performing said predetermined process to the address of a function for log acquisition,

10 wherein said function for log acquisition comprises the steps of:

calling said function for performing said predetermined process to cause said predetermined process to be executed, and receiving the result of the  
15 execution to said program;

recording given information when calling said function for performing said predetermined process and recording given information when receiving said result of the execution;

20 determining whether or not there is an unexported function according to a function definition in said program; and

25 if there is an unexported function, generating a new function for log acquisition that corresponds to said unexported function and changing the address of said unexported function into the address of said newly generated function; and

said newly generated function comprises the steps  
of:

          calling said unexported function to cause said  
process to be executed and receiving the result of the  
5 execution and passing said result to said program; and  
          recording given information when calling said  
unexported function and recording given information  
when receiving said result of the execution.

10 4. A log acquisition method for acquiring a runtime  
log of a program including a function for performing a  
predetermined process, comprising the step of:

          changing the address of said function loaded for  
performing said predetermined process to the address of  
15 a function for log acquisition,

          wherein said function for log acquisition  
comprises the steps of:

          calling said function for performing said  
predetermined process to cause said predetermined  
20 process to be executed, receiving the result of the  
execution and passing said result to said program;

          determining whether or not a pointer parameter is  
defined as a variable-length array in a function  
definition in said program; and

25       if a pointer parameter is defined as a variable-  
length array, recording a memory content pointed to by  
said pointer parameter as a variable-length array.

5. A log acquisition method for acquiring a runtime log of a program including a function for performing a predetermined process, comprising the step of:

5 changing the address of said function loaded for performing said predetermined process to the address of a function for log acquisition,

wherein said function for log acquisition comprises the steps of:

10 calling said function for performing said predetermined process to cause said predetermined process to be executed, receiving the result of the execution and passing said result to said program;

determining whether or not a pointer parameter is specified as a structure in a function definition in said program; and

if a pointer parameter is specified as a structure, recording a memory content pointed by said pointer as a log of size of said structure defined in the function definition in said program.

6. A log acquisition method for acquiring a runtime log of a program including a function for performing a predetermined process, comprising the step of:

25 changing the address of said function loaded for performing said predetermined process to the address of a function for log acquisition,

wherein said function for log acquisition comprises the steps of:

- calling said function for performing said predetermined process to cause said predetermined process to be executed, receiving the result of the execution and passing said result to said program;
- determining whether or not a pointer parameter the type of which is specified as a structure is defined in a function definition in said program; and
- 10       if a pointer parameter of the type of which is specified as a structure is defined, recording a memory content pointed to by said pointer parameter as data of the specified data type.
- 15      7. A log acquisition method for acquiring a runtime log of a program including a method for performing a predetermined process, comprising the process of:
- changing said method loaded for performing said predetermined process to the address of a method for log acquisition;
- wherein said method for log acquisition comprises the steps of:
- calling said method for performing said predetermined process to cause said predetermined process to be executed, receiving the result of the execution, and passing said result to said program;

determining whether or not a pointer parameter is  
defined in a predetermined manner in a function  
definition in said program; and  
if the pointer parameter is defined in the  
5 predetermined definition manner, recording a memory  
content pointed by said pointer parameter as a log  
according to said definition.

8. The log acquisition method according to claim 7,  
10 wherein said method for log acquisition further  
comprising the step of calculating memory size  
according to said definition, wherein said recording  
step records an amount of the memory content pointed to  
by said pointer parameter, said amount being equal to  
15 said calculated memory size.

9. A log acquisition method for acquiring a runtime  
log of a program including a method for performing a  
predetermined process, comprising the process of:  
20 changing said method loaded for performing said  
predetermined process to the address of a method for  
log acquisition;  
wherein said method for log acquisition comprises  
the steps of:  
25 calling said method for performing said  
predetermine process to cause said predetermined

process to be executed, receiving the result of the execution, and passing said result to said program;

recording given information when calling said method for performing said predetermined program and

5 recording given information when receiving said execution result;

determining whether or not there is an unexported method according to a function definition in said program; and

10 if there is an unexported method, generating a new method for log acquisition that corresponds to said unexported method and changing the address of said unexported method to the address of said newly generated method; and

15 said newly generated method comprises the steps of:

calling said unexported method to cause said process to be executed and receiving the result of the execution and passing said result to said program; and

20 recording given information when calling said unexported method and recording given information when receiving said result of the execution.

10. A log acquisition method for acquiring a runtime log of a program including a method for performing a predetermined process, comprising the step of:

changing the address of said method loaded for performing said predetermined process to the address of a method for log acquisition,

wherein said method for log acquisition comprises  
5 the steps of:

calling said method for performing said predetermined process to cause said predetermined process to be executed, receiving the result of the execution and passing said result to said program;

10 determining whether or not a pointer parameter is defined as a variable-length array in a function definition in said program; and

if a pointer parameter is defined as a variable-length array, recording a memory content pointed to by  
15 said pointer parameter as a variable-length array.

11. A log acquisition method for acquiring a runtime log of a program including a method for performing a predetermined process, comprising the step of:

20 changing the address of said method loaded for performing said predetermined process to the address of a method for log acquisition,

wherein said method for log acquisition comprises the steps of:

25 calling said method for performing said predetermined process to cause said predetermined

process to be executed, receiving the result of the execution and passing said result to said program;

determining whether or not a pointer parameter is specified as a structure in a function definition in

5 said program; and

if a pointer parameter is specified as a structure, recording a memory content pointed by said pointer as a log of size of said structure defined in the function definition in said program.

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12. A log acquisition method for acquiring a runtime log of a program including a method for performing a predetermined process, comprising the step of:

changing the address of said method loaded for

15 performing said predetermined process to the address of a method for log acquisition,

wherein said method for log acquisition comprises the steps of:

calling said method for performing said

20 predetermined process to cause said predetermined process to be executed, receiving the result of the execution and passing said result to said program;

determining whether or not a pointer parameter the type of which is specified as a structure is defined in

25 a function definition in said program; and

if a pointer parameter of the type of which is specified as a structure is defined, recording a memory

content pointed to by said pointer parameter as data of the specified data type.

13. A storage medium storing a control program for  
5 causing a computer to implement the log acquisition method according to claim 1.

14. A control program for causing a computer to implement the log acquisition method according to claim  
10 1.

15. A log acquisition method for obtaining a runtime log of a program including a function for performing a predetermined process, comprising the steps of:

15 changing the address of said function loaded for performing said predetermined process to the address of a function for log acquisition; and

selecting said function for log acquisition;  
wherein said function for log acquisition

20 comprises the steps of:

calling said function for performing said predetermined process to cause said process to be executed, receiving the result of the execution, and passing said result to said program;

25 recording given information as a log when calling said function selected in said selecting step; and

recording given information as a log when receiving the result of execution of said function selected in said selecting step.

5    16. A log acquisition method for acquiring a runtime log of a program including a function for performing a predetermined process, comprising the steps of:

      changing the address of said function loaded for performing said predetermined process to the address of  
10    a function for log acquisition; and  
      selecting said function for performing said predetermined process;

      wherein said function for log acquisition comprises the steps of:

15        calling said function for performing said predetermined process to cause said predetermined process to be executed, receiving the result of the execution, and passing said result to said program;  
      recording given information as a log when calling  
20    said function for performing said predetermined process and recording given information as a log when receiving the result of execution of said function; and  
      stopping log recording for the function selected in said selecting step.

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17. The log acquisition method according to claim 15, wherein said function for log acquisition further

comprises the step of determining whether or nor an error has occurred during execution of the function selected in said selecting step,

and said step for recording information as a log  
5 records said given information as a log if it is determined that an error has occurred in said error determination step.

18. The log acquisition method according to claim 16,  
10 wherein said function for log acquisition further comprises the step of determining whether or nor an error has occurred during execution of the function selected in said selecting step, and

said step of stopping log recording stops log  
15 recording if it is determined that an error has occurred in said error determination step.

19. A log acquisition method for obtaining a runtime log of a program including a method for performing a  
20 predetermined process, comprising the steps of:

changing the address of said method loaded for performing said predetermined process to the address of a method for log acquisition; and  
selecting said method for performing said  
25 predetermined process;

wherein said method for log acquisition comprises the steps of:

calling said method for performing said predetermined process to cause said process to be executed, receiving the result of the execution, and passing said result to said program;

- 5 recording given information as a log when calling said method selected in said selecting step; and recording given information as a log when receiving the result of execution of said method selected in said selecting step.

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20. A log acquisition method for acquiring a runtime log of a program including a method for performing a predetermined process, comprising the steps of:

- changing the address of said method loaded for  
15 performing said predetermined process to the address of a method for log acquisition; and

selecting said method for performing said predetermined process;

wherein said method for log acquisition comprises  
20 the steps of:

calling said method for performing said predetermined process to cause said predetermined process to be executed, receiving the result of the execution, and passing said result to said program;

- 25 recording given information as a log when calling said method for performing said predetermined process

and recording given information as a log when receiving  
the result of execution of said method; and  
stopping log recording for the method selected in  
said selecting step.

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21. The log acquisition method according to claim 19,  
wherein said function for log acquisition further  
comprises the step of determining whether or nor an  
error has occurred during execution of the method  
10 selected in said selecting step,

and said step for recording information as a log  
records said given information as a log if it is  
determined that an error has occurred in said error  
determination step.

15

22. The log acquisition method according to claim 20,  
wherein said function for log acquisition further  
comprises the step of determining whether or nor an  
error has occurred during execution of the method  
20 selected in said selecting step, and

said step of stopping log recording stops log  
recording if it is determine that an error has occurred  
in said error determination step.

25 23. The log acquisition method according to claim 19,  
further comprising the step of displaying an interface

exported by a COM server and method belonging to said interface in a tree form, wherein

    said selecting step makes the selection through said display.

5

24. The log acquisition method according to claim 20, further comprising the step of displaying an interface exported by a COM server and method belonging to said interface in a tree form, wherein

10       said selecting step selects the method through said display.

25. The log acquisition method according to claim 23, wherein said selecting step makes the selection on a  
15       method-by-method basis.

26. The log acquisition method according to claim 24, wherein said selecting step makes the selection on a  
method-by-method basis.

20

27. The log acquisition method according to claim 23, wherein said selecting step selects all the methods belonging to said interface by selecting said interface.

25       28. The log acquisition method according to claim 24, wherein said selecting step selects all the methods belonging to said interface by selecting said interface.

29. A log acquisition method for acquiring a runtime log of a program including a function for performing a predetermined process, comprising the steps of:

5        changing the address of said function loaded for performing said predetermined process to the address of a function for log acquisition; and  
              selecting said function for performing said predetermined process;

10        wherein said function for log acquisition comprises the steps of:

              calling said function for performing said predetermined process to cause said predetermined process to be executed, receiving the result of the  
15        execution, and passing said result to said program; and  
              recording given information as a log when calling said function for performing said predetermined process and recording given information as a log when receiving the result of execution of said function; wherein  
20        said step of recording as a log records the log on a date-by-date basis.

30. A log acquisition method for acquiring a runtime log of a program including a function for performing a predetermined process, comprising the steps of:

changing the address of said function loaded for performing said predetermined process to the address of a function for log acquisition; and

selecting said function for performing said

5       predetermined process;

wherein said function for log acquisition comprises the steps of:

calling said function for performing said predetermined process to cause said predetermined

10      process to be executed, receiving the result of the execution, and passing said result to said program; and

recording given information as a log when calling said function for performing said predetermined process and recording given information as a log when receiving

15      the result of execution of said function; wherein

said log recording step generates a new file when the size of the log exceeds a predetermined size.

31. A log acquisition method for acquiring a runtime

20      log of a program including a function for performing a predetermined process, comprising the steps of:

changing the address of said function loaded for performing said predetermined process to the address of a function for log acquisition; and

25       selecting said function for performing said predetermined process;

wherein said function for log acquisition comprises the steps of:

calling said function for performing said predetermined process to cause said predetermined process to be executed, receiving the result of the execution, and passing said result to said program; and recording given information as a log when calling said function for performing said predetermined process and recording given information as a log when receiving the result of execution of said function; wherein

10 said log recording step generates anew file when the number of logs exceeds a predetermined number.

32. A log acquisition method for acquiring a runtime log of a program including a function for performing a predetermined process, comprising the steps of:

changing the address of said function loaded for performing said predetermined process to the address of a function for log acquisition; and

20 selecting said function for performing said predetermined process;

wherein said function for log acquisition comprises the steps of:

calling said function for performing said predetermined process to cause said predetermined process to be executed, receiving the result of the execution, and passing said result to said program; and

recording given information as a log in memory  
when calling said function for performing said  
predetermined process and recording given information  
as a log when receiving the result of execution of said  
5 function; wherein

said step of recording as log in memory moves and  
stores the log into a disk device when the number of  
logs in said memory exceeds a predetermined number.

10 33. A log acquisition method for acquiring a runtime  
log of a program including a method for performing a  
predetermined process, comprising the steps of:

changing the address of said method loaded for  
performing said predetermined process to the address of  
15 a method for log acquisition; and

selecting said method for performing said  
predetermined process;

wherein said method for log acquisition comprises  
the steps of:

20 calling said method for performing said  
predetermined process to cause said predetermined  
process to be executed, receiving the result of the  
execution, and passing said result to said program; and

recording given information as a log when calling  
25 said method for performing said predetermined process  
and recording given information as a log when receiving  
the result of execution of said method; wherein

said step of recording as a log records the log on  
a date-by-date basis.

34. A log acquisition method for acquiring a runtime  
5 log of a program including a method for performing a  
predetermined process, comprising the steps of:

          changing the address of said method loaded for  
performing said predetermined process to the address of  
a method for log acquisition; and

10       selecting said method for performing said  
predetermined process;

          wherein said method for log acquisition comprises  
the steps of:

          calling said method for performing said  
15 predetermined process to cause said predetermined  
process to be executed, receiving the result of the  
execution, and passing said result to said program; and

          recording given information as a log when calling  
said method for performing said predetermined process  
20 and recording given information as a log when receiving  
the result of execution of said method; wherein

          said log recording step generates a new file when  
the size of the log exceeds a predetermined size.

25 35. A log acquisition method for acquiring a runtime  
log of a program including a method for performing a  
predetermined process, comprising the steps of:

changing the address of said method loaded for performing said predetermined process to the address of a method for log acquisition; and

selecting said method for performing said  
5 predetermined process;

wherein said method for log acquisition comprises the steps of:

calling said method for performing said predetermined process to cause said predetermined  
10 process to be executed, receiving the result of the execution, and passing said result to said program; and recording given information as a log when calling said method for performing said predetermined process and recording given information as a log when receiving  
15 the result of execution of said method; wherein said log recording step generates a new file when the number of logs exceeds a predetermined number.

36. A log acquisition method for acquiring a runtime  
20 log of a program including a method for performing a predetermined process, comprising the steps of:

changing the address of said method loaded for performing said predetermined process to the address of a method for log acquisition; and  
25 selecting said method for performing said predetermined process;

wherein said method for log acquisition comprises  
the steps of:

- calling said method for performing said  
predetermined process to cause said predetermined  
5 process to be executed, receiving the result of the  
execution, and passing said result to said program; and  
recording given information as a log in memory  
when calling said method for performing said  
predetermined process and recording given information  
10 as a log when receiving the result of execution of said  
method; wherein  
said step of recording as log in memory moves and  
stores the log into a disk device when the number of  
logs in said memory exceeds a predetermined number.
- 15
37. A storing medium storing a control program for  
causing a computer to implement the log acquisition  
method according to claim 15.
- 20 38. A control program for causing a computer to  
implement the log acquisition method according to claim  
15.